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Robert Baer

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EXAMINER

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

1 RECORD OF ORAL HEARING
2
3 UNITED STATES PATENT AND TRADEMARK OFFICE
4

5
6 BEFORE THE BOARD OF PATENT APPEALS
7 AND INTERFERENCES
8

9
10 *Ex parte* ROBERT BAER, LON DEHAITRE, CHARLES KADISH,
11 MARK ROMANO, and MICHAEL TIPPS
12

13
14 Appeal 2009-012870
15 Application 10/752,431
16 Technology Center 3600
17

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19 Oral Hearing Held: September 20, 2011
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21
22 Before STEFAN STAICOVICI, GAY A. SPAHN, and
23 MICHAEL C. ASTORINO, *Administrative Patent Judges*.
24

25 ON BEHALF OF THE APPELLANT:
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32 The above-entitled matter came on for hearing on Thursday,
33 September 20, 2011, commencing at 1:01 p.m., at the U.S. Patent and
34 Trademark Office, 600 Dulany Street, 9th Floor, Hearing Room B,
35 Alexandria, Virginia, before Lori B. Allen, notary public.
36

1 THE USHER: Calendar Number 57, Appeal Number 2009-012870,
2 Mr. Burns.

3 JUDGE STAICOVICI: Mr. Burns?

4 MR. BURNS: My name is Patrick Burns, and with me this afternoon
5 is Michael Tipps. He's one of the inventors of the present invention. We
6 certainly appreciate the opportunity to talk about this case. It's very
7 important to our client commercially. Obviously, there's some difficulty
8 with the rejections.

9 I'd like to begin with a perspective about the case. It's not just a
10 screw. This case is not just about screws. It is about screws for composite
11 materials. Composite materials are different than wood. Wood is open-cell,
12 so it compresses like a handful of straw would. Composite material is
13 plastic and wood fibers. It doesn't compress. It's more like sand. It's hard
14 and solid, so it's not just about screws. This case is about screws that
15 penetrate composite material.

16 It's also not about guys like me. It's not about guys who fasten
17 plywood to 2 x 4s on Saturday morning with half a dozen screws, because I
18 have the time to drill pilot holes. I have the time to replace boards as they
19 split. I have the time to replace broken screws if they break. This case is
20 about professionals. These screws are made for professionals.

21 Professionals don't have the time to drill pilot holes. They don't have
22 the time for split boards. They don't have the time for broken screws and
23 mushrooming, which we will talk about later.

24 So it's with that perspective, both time and materials, that I'd like to
25 talk about these references. The primary reference is Craven. Craven is
26 designed for composite materials. Craven is two sets of threads. One
27 thread, of course, auditors material out of the hole. The other thread pushes

1 the material back, and Craven talks extensively about trying to keep that
2 material inside the hole.

3 What's the problem with that? The problem is that it builds up
4 pressure in the hole, and the pressure causes splitting of the wood. It will
5 increase the torque required to get the screw into the composite material so
6 you can have screw breakage problems. And, of course, it's just plain harder
7 to get the screw out.

8 The present invention addresses and solves that problem with a tri
9 lobes, that is, three lobes on the thread, that create room inside the hole for
10 remnant materials -- you know, the cut materials, so it relieves pressure
11 inside the hole.

12 JUDGE ASTORINO: Excuse me, Mr. Burns. Can I stop you for one
13 second on that point?

14 MR. BAER: Of course.

15 JUDGE ASTORINO: Could you explain a little bit about the three
16 radial lobes? In the claim it says, "The thread in the first portion of the shaft,
17 having three radial lobes." And in the specification on page 7 it says,
18 "Figure 7 shows the threads 69 are formed in three radial lobes, and each
19 lobe spanning 120 degrees around the point 56."

20 Now in the claim it seems below the first portion of the shaft, also. It
21 may also include three radial lobes. Is it the threads or the threads in the
22 shaft, those three radial lobes?

23 MR. BAER: Let me pull the claim out quickly, Judge.

24 JUDGE ASTORINO: Okay.

25 MR. BAER: "The threads and the first portion of the shaft," you have
26 three radial lobes. That's the claim. Does that answer the question?

27 JUDGE ASTORINO: I'm sorry. Can you repeat that?

1 MR. BAER: Yeah. Well, the claim recites that the threads and the
2 first portion of the shaft, you have three radial lobes.

3 JUDGE ASTORINO: Okay. Can you just help me understand what
4 part of the shaft has three radial lobes? And a good example would be if you
5 could point to Figure 7.

6 MR. BAER: Okay. Sure. And I'm sorry, Judge. You want to know
7 where the first portion is?

8 JUDGE ASTORINO: No. The claim says the threads and the first
9 portion of the shaft, I think, can be radial lobes. In the specification it seems
10 it discussed how the threads have three radial lobes, which is 64. That's on
11 page 5 of the specification, lines 2 through 3. But it seems as though in the
12 claim you state the first portion of the shaft also has three radial lobes; and
13 I'm not sure what part of the shaft here would have those lobes. Is it just the
14 red or also the --

15 MR. BAER: Well, I think the other portion -- I'm going to say it's 52 -
16 - that all could be trifold.

17 JUDGE ASTORINO: 52 refers to the shaft? Okay. So is it just
18 because it has three different curves which make up the shape of that?

19 MR. BAER: Yes, yes, the points 57.

20 JUDGE ASTORINO: Okay. And that shape of the shaft would
21 represent the relating of lobes?

22 MR. BAER: So basically you have a shaft that has three lobes, and
23 then you put the thread on it.

24 JUDGE ASTORINO: Okay. Thanks.

25 MR. BAER: Okay?

26 JUDGE ASTORINO: Yes, thanks.

1 MR. BAER: Good. Okay. So we were talking about Craven, I think,
2 and the fact that Craven was designed and intended to retain the remnants of
3 the cut material, whereas the present invention removes the remnants, so it
4 creates room inside. That really does two things. It creates room inside and
5 it also has some room. The tri-lobe leaves some room inside the hole to
6 relieve pressure, so we can solve that problem.

7 Let's talk about the secondary references. There are two secondary
8 references. Fukubayashi is not made for pilot. I mean, it needs a pilot hole.
9 It doesn't have a gyp, it has to have a pilot hole, so relieving pressure is not
10 a problem. It's also designed for wood, think pieces of wood. So it's not in
11 the field of composite material, fastening composite materials. It also has no
12 need to address this pressure relief we're discussing.

13 Lindsay also needs a pilot hole; and, of course, Lindsay is made for
14 wood 1871. Lindsay is not also in the field of fastening composite screws,
15 and it does not address the problems related to relief of pressure, as in the
16 present invention. So for both of these reasons, we think it was
17 unreasonable for the examiner to use these references, combine them with
18 Craven, to support a rejection. Also the heading of Lindsay is undercut, as
19 in the present claims, but it's there to cut the wood fibers. It cuts the fibers
20 where the present invention -- our undercut head pushes the fiber down if
21 there are any remnants. It keeps them, if there's anything left, encapsulates
22 them.

23 So for all these reasons, we think it was unreasonable for the examiner
24 to combine these two secondary references with the primary reference,
25 Craven. You'll see in Lindsay, for example, that the undercut head is a sharp
26 edge. It's a sharp edge, and that's there in order to cut the wood fibers, which
27 aren't even present in composite materials. You know? I'd like to add the

1 composite materials, because they are plastic and resonant, and of course
2 they're solid -- very solid.

3 When you heat that plastic, it's going to get gooey and gummy, and so
4 it has a different reaction to heat and drilling than wood does, which wood,
5 of course, turns into sawdust.

6 JUDGE STAICOVICI: Doesn't composite materials have wood and
7 some kind of plastic?

8 MR. BAER: Oh, it is, yes.

9 JUDGE STAICOVICI: It does have some wood?

10 MR. BAER: Oh, yeah. Yes, it does. I think they call it flower, wood
11 flower.

12 JUDGE STAICOVICI: Like the tracks, the tracks side? Would that
13 be?

14 MR. BAER: Tracks, yes, I believe that's right. Yes. But because of
15 the plastic, of course, there's no surrounding fibers. It's not open-celled like
16 wood is, because of the plastic. And, of course, it operates quite differently.

17 Before I sum up, I'd like to invite any questions or comments you
18 might have.

19 JUDGE ASTORINO: The examiner's combination for Lindsay was
20 based on he provided a reason to prevent that head from pressing fibers
21 apart, splitting the material, and the remainder left flat and smooth. And the
22 remainder would be left flat and smooth. Could you comment on that in
23 terms of are you saying that that would not be the case in terms of the benefit
24 of the structure of Lindsay?

25 MR. BAER: Mm-hmm. Mm-hmm. What page are you referring to?
26 The examiner's response, there's no number.

1 JUDGE ASTORINO: I believe that the motivation is right in the
2 answer at page 5.

3 MR. BAER: "Prevent the head from pressing the fibers apart and
4 splitting." Lindsay operates in a different way, and it performs for a
5 different purpose. It's cutting wood fibers, as we are simply capturing
6 remnant composite material, and the screw goes in, if there is any remnant
7 material at the opening. So with composite material, you don't have fibers.

8 JUDGE ASTORINO: What about they also mentioned, then, splitting
9 the material? What would prevent that?

10 MR. BAER: If you used his head in our invention, the composite
11 material?

12 JUDGE ASTORINO: Well, if you were to combine the Lindsay
13 reference with Craven, would the benefit of that head, would that --

14 MR. BAER: Mm-hmm. Well, it's a sharp edge, Judge, so it would
15 penetrate. It would penetrate the fibers. Or, excuse me. Penetrate the
16 composite material. But it's not cutting fiber. The wood has long strands of
17 fibers, and composite material does not.

18 JUDGE ASTORINO: Would that difference result in the splitting of
19 the material?

20 MR. BAER: If it's a cutting edge, Judge, I would expect that it would
21 penetrate into that, cut into it, at least penetrate. Whether it's cutting or not
22 I'm really not sure. I don't know. But I know this. I think that it would not
23 be apparent to someone trying to design a fastener for composite material,
24 and addressing the problems with Craven, which is completely relieving
25 pressure to look at a reference like Lindsay, and look at a head that is there
26 to cut wood fibers.

1 JUDGE SPAHN: I'd just like to ask a question. You talked a little bit
2 about the pilot holes with respect to Fukubayashi, and Fukubayashi has the
3 three lobes, but it doesn't have a tip.

4 MR. BAER: Yes.

5 JUDGE SPAHN: So the examiner modified Craven to have the lobes,
6 but Craven has the tip. So I think if you modified Craven by Fukubayashi,
7 you keep the tip. You just make the shape to have the three lobes.

8 MR. BAER: Yes.

9 JUDGE SPAHN: If you would do that, would you then need the pilot
10 hole as long as Craven has the pointed tip? Wouldn't you then not need a
11 pilot hole?

12 MR. BAER: Your question was whether you need a pilot hole that
13 started with Craven and put the three lobes on it.

14 JUDGE SPAHN: Correct.

15 MR. BAER: Yes. I don't think you would need the pilot hole,
16 because Craven, itself, does not need a pilot hole.

17 JUDGE SPAHN: Okay.

18 MR. BAER: That's really not our question, our issue. Our point is
19 that it is unreasonable to combine the two references. Someone trying to
20 address problems related to composite material with the time constraints that
21 I discussed, so you can't have split boards at the end and so forth, would not
22 look to a screw. It needs a pilot hole.

23 I think the *In re Kline* is a pretty informative case that came down
24 from the Federal Circuit just in the last couple of months. And in that case
25 the prior art and the invention were containers. One container -- that is, the
26 inventive container -- had a partition that was used to mix material. The

1 prior art had a very similar container structurally, but it was used to separate
2 materials.

3 The Federal Circuit said that it was wrong for the examiner to look at
4 art relating to separation with respect to an invention that dealt with fixing,
5 even though the structures were very similar. And our point here today is
6 we think that the drilling with or without a pilot hole is a significant
7 difference, very significant difference. Your problems are completely
8 different. Your timeframe with respect to how you're using these screws is
9 these guys are putting in decks in homes and they've got to go quickly and
10 reliably. And you can't use a pilot. You just don't have time to drill a pilot
11 hole.

12 So by now we think this case is similar to *In re Kline*. And *In re Clay*
13 is another case that I think there's some relevance. That case involved
14 petroleum products. The invention was directed towards emptying those big
15 storage tanks we see at airports, and we found some gook that you put in the
16 bottom of it. You push the bottom stuff up so you can get it out of the spout,
17 because the spout's a couple feet off the ground.

18 The prior art is a very similar stuff that they put into an oil well to
19 push the oil on the bottom up to the surface where they could get it out; and
20 the Federal Circuit found that that was not analogous art and distinguished
21 between hydrocarbon or petroleum, refining and petroleum extraction. And,
22 again, in this case the differences between fasteners, use a pilot hole and
23 fasteners that don't, are pretty significant. They're quite significant for the
24 reasons that we talked about.

25 It's hard to understand, really, that we're not just talking about screws.
26 It's not just the screw. We're talking about high volume work that requires a
27 lot of design, just as in so many other products.

1 JUDGE ASTORINO: Are you saying that the fastener in your claim,
2 Claim 1, wouldn't be used with the pilot hole?

3 MR. BAER: Well, you could drill a pilot hole for it. Sure, you could.
4 Sure, you could. It would just take more time. It would take time.

5 JUDGE ASTORINO: Right.

6 MR. BAER: I honestly don't know if a professional would want to do
7 that, because I have no idea what effect that might have on the holding
8 power or the sticking power of the screw. That I don't know. Working in
9 my garage on a Saturday, I could probably drill a pilot hole and use one of
10 those screws.

11 JUDGE ASTORINO: But people who aren't professional also work
12 with composite materials. Correct?

13 MR. BAER: I'm sure they do. Sure. I'm sure they do.

14 JUDGE ASTORINO: And if they wanted to be a little bit, if they had
15 incentive to not split a composite material, they could drill a pilot hole?

16 MR. BAER: They could. Of course they can drill a pilot hole if they
17 wanted to, Judge. Sure. The question, though, when we look at an inventor
18 addressing a problem, should be directed to some application. In this case
19 the application is without a pilot hole.

20 JUDGE STAICOVICI: But the claim doesn't require it. It doesn't
21 mention anything about pilot holes.

22 MR. BAER: Well, no, but we have a point. We have a point at the
23 end of the shaft. And remember, also, Judge, we're talking here about the
24 reasonableness of combining the references, the reasonableness of taking the
25 references that need a pilot hole and using it and combining them with a
26 screw that does not.

27 JUDGE STAICOVICI: Thank you, sir. I'll write an advisement.

- 1 MR. BAER: Okay. Thank you very much.
- 2 [The hearing was concluded at 1:20 p.m.]